


IN THE TITLE:

 Please amend the title to read as follows: --Control system for controlling a telephone system, a telephone system, a mail box facility for use with a telephony system, a method of controlling a telephone system, a telephone method, a computer readable medium storing computer executable process steps for controlling, defining, or providing a mail box facility for use with a telephone system, or a computer executable program for controlling, defining, or providing a telephone system--.

REMARKS

Summary

Independent Claims 63, 64, and 88, and newly-added independent Claims 89, 90, 112, 113, and 131-136 recite at least one feature not disclosed or suggested by the patent to Herrero Garcia, et al. Therefore is the outstanding rejection of Claims 63, 64, and 88 still proper?

Status of the claims

Claims 63-67, 69, 70-76, 79-81, 83, 84, and 88 have been amended. Claims 86 and 87 are canceled without prejudice. Claims 89-136 have been added. Claims 63, 64, 88, 89, 90, 113, and 131-136 are independent. Therefore, Claims 63-85, and 88-136 are pending in the application.



Requested action

Applicants respectfully request that the Examiner reconsider and withdraw the outstanding objections and rejections in view of the foregoing amendments and the following remarks.

Formal objection and rejection

The Examiner has required a new title more descriptive of the claimed invention. In response, while not conceding the propriety of the objection, Applicants have provided a new title that is even more clearly indicative of the invention to which the claims are directed.

The Examiner has also rejected Claims 64 and 66 under 35 U.S.C. § 112, second paragraph, for a minor informality in Claim 64. In response, while not conceding the propriety of the rejection, Applicants have amended Claim 64 to address the points raised by the Examiner. Applicants submit that as amended, Claim 64 now even more clearly satisfies 35 U.S.C. § 112, second paragraph.

Substantive rejection

Claims 63-88 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,187,735 (Herrero Garcia, et al.).

Response to substantive rejection

In response, while not conceding the propriety of the rejection, independent Claims 63, 64, and 88 have been amended. Applicants submit that as amended, these claims are allowable for the following reasons. Applicants also submit that newly-added independent Claims 89, 90, 112, 113, and 131-136 are allowable for the following reasons.

A. Independent Claims 63, 89, 112, 131, and 134

Independent Claim 63 relates to a control system for controlling a telephony system, comprising a speech recognition user interface for allowing a user to input speech commands for controlling the telephony system and control means, responsive to a recognition result generated by the speech recognition user interface, for controlling the telephony system in accordance with the input speech command. Claim 63 also recites that the speech recognition user interface is adapted to be able to recognize continuously spoken commands comprising a plurality of words defining a desired telephony service and an identifier of another user. In addition, Claim 63 recites that the control means comprises execution means for executing an operation corresponding to the input speech command.

Claim 63 has been amended to recite that the speech recognition user interface comprises (i) means for receiving an input speech command, (ii) means for storing a plurality of reference word models, and (iii) means for comparing the input speech command with the stored reference word models to generate a recognition result.

Claim 63 has also been amended to recite that the speech recognition user interface further comprises means for storing a language model which defines sequences of the



reference word models which can be compared with the input speech command, in order to define allowed input speech commands.

Claim 63 has been further amended to recite that the comparing means is operable to compare the input speech command with selected sequences of the reference word models, selected in accordance with the stored language model.

By this arrangement, the system is prevented from searching for phrases that are not known to the system, even though individual words in the phrases are known.

In contrast, the patent to Herrero Garcia, et al. is not understood to disclose or suggest a speech recognition user interface comprising means for receiving an input speech command, means for storing a plurality of reference word models, means for comparing the input speech command with the stored reference word models to generate a recognition result, and means for storing a language model which defines sequences of the reference word models which can be compared with the input speech command, in order to define allowed input speech commands, and comparing means that is operable to compare the input speech command with selected sequences of the reference word models, selected in accordance with the stored language model, as recited by amended Claim 63.

The failure of this patent to disclose or suggest at least these features of amended Claim 63 also proves fatal to establishing anticipation of amended Claim 63 under 35 U.S.C. §102, since MPEP §2131 states:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

For this reason, amended Claim 63 is allowable over the Herrero Garcia, et al. patent.



And since independent Claims 89, 112, 131, and 134 recite similar features, they are allowable for similar reasons.

B. Independent Claims 64, 90, 113, 132, and 135

Independent Claim 64 relates to a telephony system comprising a speech recognition user interface for allowing a user to input speech commands for controlling telephony services provided by the system, and execution means, responsive to a recognition result generated by the speech recognition user interface, for executing an operation corresponding to the speech command, where each user of the system is identified by a telephone number and an associated identifier.

Claim 64 has been amended to recite that the speech recognition user interface comprises (i) means for receiving an input speech command, means for storing a plurality of reference models, and (iii) means for comparing the input speech command with the stored reference models to generate a recognition result.

Claim 64 has also been amended to recite that the execution means comprises means for receiving data identifying a current status of the telephony system, and means for predicting a desired telephony service using the current system status data.

Claim 64 has further been amended to recite that if the user input command identifies a telephony service, then the execution means is operable to provide the desired telephony services identified in the input speech command.

Finally, Claim 64 has been amended to recite that the execution means is operable to predict a desired telephony service using the predicting means and the current system status data, if the input speech command does not identify a desired telephony service.

By this arrangement, the system will carry out a desired telephony service even if the voice command does not identify the telephony service.

In contrast, the patent to Herrero Garcia, et al. is not understood to disclose or suggest execution means comprising means for receiving data identifying a current status of the telephony system, and means for predicting a desired telephony service using the current system status data so that if the user input command identifies a telephony service, then the execution means is operable to provide the desired telephony services identified in the input speech command, and so that the execution means is operable to predict a desired telephony service using the predicting means and the current system status data, if the input speech command does not identify a desired telephony service, as recited by amended Claim 64.

The failure of this patent to disclose or suggest at least these features of amended Claim 64 also proves fatal to establishing anticipation of amended Claim 64 under 35 U.S.C. §102, since MPEP §2131 states:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

For this reason, amended Claim 64 is allowable over the Herrero Garcia, et al. patent.

And since independent Claims 90, 113, 132, and 135 recite similar features, they are allowable for similar reasons.

C. Independent Claims 88, 133, and 136

Independent Claim 88 relates to a mail box facility for use with a telephony system, comprising a speech recognition user interface for allowing a user to input speech commands for controlling the mail box facility, and for outputting a recognition result based on comparing the input speech commands with pre-stored reference models, control means, responsive to the recognition result output from the speech recognition user interface, for controlling the mail box facility in accordance with an input speech command, and storage means for storing messages left by callers, when the users are unable to take the calls.

Claim 88 has been amended to recite that the storage means comprises means for receiving the telephone number of the caller and for storing the telephone number with the message, whereby users can request, via the speech recognition user interface, the mailbox facility to replay messages from a particular caller.

In contrast, the patent to Herrero Garcia, et al. is not understood to disclose or suggest storage means comprising means for receiving a telephone number of a caller and for storing the telephone number with a message, whereby users can request, via the speech recognition user interface, the mailbox facility to replay messages from a particular caller, as recited by amended Claim 88.

The failure of this patent to disclose or suggest at least these features of amended Claim 88 also proves fatal to establishing anticipation of amended Claim 88 under 35 U.S.C. §102. For this reason, amended Claim 88 is allowable over the Herrero Garcia, et al. patent.

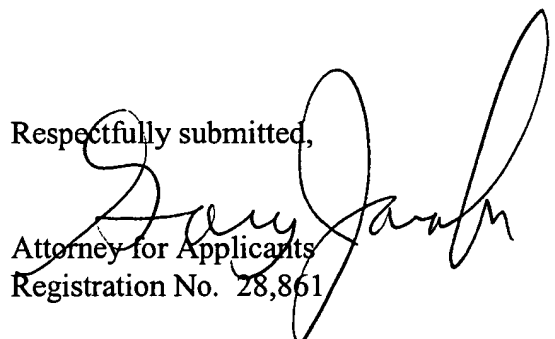
And since independent Claims 133 and 136 recite similar features, they are allowable for similar reasons.

The dependent claims are allowable for the reasons given with respect to the independent claims and because they recite features which are patentable in their own right. Individual consideration of the dependent claims is respectfully solicited.

In view of the above amendments and remarks, the claims are now in allowable form. Therefore, early passage to issue is respectfully solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone (202) 530-1010. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


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MARKED-UP AMENDED CLAIMS
U.S. Patent Appln. No. 09/359,912

(Amended) A control system for controlling a telephony system, comprising:

a speech recognition user interface for allowing a user to input speech commands for controlling the telephony system, [and for outputting a recognition result based on comparing the input speech commands with pre-stored reference models] said speech recognition user interface comprising:

(i) means for receiving an input speech command;

(ii) means for storing a plurality of reference word models;

(iii) means for comparing the input speech command with the stored reference word models to generate a recognition result; and

control means, responsive to the recognition result [output from] generated by [the] said speech recognition user interface, for controlling the telephony system in accordance with [an] the input speech command;

wherein [the] said speech recognition user interface is adapted to be able to recognize continuously spoken commands comprising a plurality of words defining a desired telephony service and an identifier of another user;

wherein said speech recognition user interface further comprises means for storing a language model which defines sequences of the reference word models which can be compared with the input speech command, in order to define allowed input speech commands; and

wherein said comparing means is operable to compare the input speech command with selected sequences of the reference word models, selected in accordance with the stored language model [by comparing allowed sequences of word models, defined by a stored language model, with the input speech command,] and wherein [the] said control means comprises execution means for executing an operation corresponding to the input speech command.

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64. (Amended) A telephony system comprising:

a speech recognition user interface for allowing a user to input speech commands for controlling telephony services provided by the system, said speech recognition user interface comprising:

(i) means for receiving an input speech command;

(ii) means for storing a plurality of reference models; and

(iii) means for comparing the input speech command with the stored reference models to generate a recognition result; [and for outputting a recognition result based on comparing the input speech commands with pre-stored reference models;] and

execution means, responsive to the recognition result [output from] generated by [the] said speech recognition user interface, for executing an operation corresponding to the speech command,

wherein each user of the system is identified by a telephone number and an associated identifier, and wherein [the] said execution means comprises:

means for receiving data identifying a current status of the telephony system; and

means for predicting a desired telephony service using the current system status data;

wherein if the user input command identifies a telephony service, then said execution means is operable to provide the desired telephony services identified in the input speech command; and

wherein said execution means is operable to predict a desired telephony service using said predicting means and the current system status data, if the input speech command does not identify a desired telephony service [is adapted to predict, using current system status information, what telephony service is wanted, if the user inputs, via the speech recognition user interface, only the identifier of another user].

2
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65. (Amended) A system according to claim 63, wherein the execution means [is adapted to communicate with users of the system in dependence upon information representative of the current status of the system, wherein the execution means is adapted] further comprises:

[(i) to hold the] (i) means for holding current system status information;

[(ii) to check] (ii) means for checking that the operation corresponding to the speech command does not conflict with the current system status information; and

[(iii) if there is no conflict, to request the user] (iii) means for requesting the user to confirm the speech command prior to execution if said checking means determines that the input speech command does not conflict with said current system status information, and

wherein a buffer is provided for buffering new system status information which is generated whilst [the] said execution means awaits user confirmation.

66. (Amended) A system according to claim 64, wherein the current system status [information] data comprises, for each user, data indicating: who the user is currently speaking to, who the user is dialing, who is on hold, who is trying to ring that user, whether that user is playing messages, who has that user on hold, and/or who has that user in a conference.

67. (Amended) A system according to claim 63, wherein the desired telephony [services] service comprises one of the following services: setting up a call, transferring a call, holding a call, returning to a call, setting up a conference call, and message selection and replaying.

69. (Amended) A system according to claim 63, [wherein each user in the system has an associated] further comprising a plurality of storage means each associated with a respective user of the system, for

storing the telephone numbers and associated identifiers of other users, whereby a user can designate another user of the system by speaking the corresponding identifier into [the] said speech recognition user interface.

70. (Amended) A system according to claim 69, wherein [the] said execution means [is adapted to predict] comprises means for predicting, using current system status information, what telephony service is wanted if the user inputs, via [the] said speech recognition user interface, only the identifier of another user.

71. (Amended) A system according to claim 63, wherein [the] said speech recognition user interface comprises means for training said speech recognition user interface [can be trained] to recognize new speech commands.

72. (Amended) A system according to claim 71, further comprising means for receiving a new input speech command comprising two or more whole words; means for generating a word model for each of the words contained within the new input speech command, if they do not already exist; and means for adapting the language model to accommodate the new speech [commands, and wherein a means is provided for generating new reference models for those words in the new speech commands for which there is not an existing reference model] command.

73. (Amended) A system according to claim 63, wherein each user has an associated set of reference word models.

74. (Amended) A system according to claim 63, wherein said control [system] means is provided in a local exchange.

75. (Amended) A system according to claim 63 in combination with the telephony system, further comprising a number of communication devices for use by [user] users of the telephony system, which are interconnected via a local exchange.

76. (Amended) A system according to claim 75, wherein the execution means is [adapted] operable to communicate with each of the users via the respective communication devices, information representative of the current status of the system.

79. (Amended) A system according to claim 75, further comprising a mail box facility which is operable to store [stores] messages for users of the system left by callers, when the users are unable to take the calls.

80. (Amended) A system according to claim 79, wherein the mail box facility is operable to associate and store each message [stored in the mail box facility is associated] with the telephone number of the caller who left the message.

81. (Amended) A system according to claim 80, wherein [users can request, via] the speech recognition user interface[,] includes a command that allows users to request the mail box facility to replay messages from a particular caller.

83. (Amended) A system according to claim 75, further comprising means for sharing [wherein the] use of [the] said speech recognition user interface and [the] said execution means [is time multiplexed] between a number of different users.

84. (Amended) A system according to claim 75, further comprising [wherein] a plurality of speech recognition [users] user interfaces and a plurality of execution means [are provided,] for simultaneous use by a plurality of different users.

88. (Amended) A mail box facility for use with a telephony system, comprising:

a speech recognition user interface for allowing a user to input speech commands for controlling the mail box facility, and for outputting a recognition result based on comparing the input speech commands with pre-stored reference models;

control means, responsive to the recognition result output from [the] said speech recognition user interface, for controlling the mail box facility in accordance with an input speech command; and

storage means for storing messages left by callers, when the users are unable to take the calls,

wherein [each message stored in the mailbox is associated with the telephone number of the caller who left the message] said storage means comprises means for receiving the telephone number of the caller and for storing the telephone number with the message, whereby users can request, via [the] said speech recognition user interface, the mailbox facility to replay messages from a particular caller.